Translation of the pertinent portions of an International Preliminary Examination Report, mailed 08/03/2005

2. This report comprises a total of 11 pages, including the cover page.

3. Furthermore, ATTACHMENTS are enclosed with this report, these include

a. (forwarded to Applicant and the international office) a total of six pages; these are

x pages of the specification, claims and/or drawings which were amended and on which this report is based and/or pages with corrections approved by this office.

4. This report contains information regarding the following items:

Field No. I	Basis of the Report
Field No. III	No Preparation of an Expert Opinion Regarding Novelty, Inventive Activities and Commercial Applicability
Field IV	Lack of Unity of the Invention
Field V	Reasoned Determination under Article 35(2)
Field VIII	Certain Remarks Regarding the International Application

I Basis of the Report

1. Regarding the **language**, the report was prepared based on the international application in the language in which it was filed, if nothing else is indicated under this item.

2. Regarding the **contents** of the International Application, the report is based on:

Specification, pages

2 to 9	in the originally filed version
1, 1a	received 10/21/05 with letter of 10/19/05

Claims, nos.

1 to 20	received 10/21/05 with letter of 10/19/05

Drawings, sheets

1/2 to 2/2	in the originally filed version

Field No. III No Preparation of an Expert Opinion Regarding Novelty, Inventive Activities and Commercial Applicability

1. The following portions of the application have not been examined whether the claimed invention is to be considered as novel, based on inventive activities (not obvious) and commercially applicable:

x Claims 3 to 12, 14, 15

Reasons:

x No international search report was prepared for the entire application or above mentioned claims 3 to 12, 14, 15.

x See the attached sheet for further information.

Field IV Lack of Unity of the Invention

1. Upon a request to limit the claims or paying additional fees, Applicant has

X paid additional fees

3. The Office is of the opinion that the requirement of unity in accordance with Rules 13.1, 13.2 and 13.3

x has not been met for the following reasons:

see the attached sheet.

4. Therefore an examination of the following portions of the international application has been performed:

x all portions relating to claims 1, 2, 4 to 20.

Field No. V Reasoned Determination under Article 35(2)

1. Determination

Novelty	Yes: Claims 1, 2, 4-20 No: Claims
Inventive Activities	Yes: Claims 1, 2, 4-20 No: Claims
Commercial Applicability	Yes: Claims 1, 2, 4-20 No: Claims

2. References and Explanations

see attached sheet

Field VIII Certain Remarks Regarding the International Application

The following is noted regarding the clarity of the claims, the specification and the drawings, or regarding the question whether the claims in their entirety are supported by the specification:

see the attached sheet

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

ATTACHED SHEET

Re.: Item III

1. Applicant is advised that the subject of claims 3 to 12, 14 and 15 has not been examined, because no international search report had been prepared for the mentioned claims (Rule 66.1e) and 66.2 a)vi) PCT).

Re.: Item IV

1. This Office has determined that the international application contains several inventions or groups of inventions which are not connected by a single common inventive idea (Rule 13.1 PCT), namely:

I: Claims 1, 4 to 8, 14 to 17

Method for producing a printed product.

II: Claims 2, 4 to 15, 18 to 20

Further processing device of a roller printing press.

The reasons for this are the following:

2. The search revealed the following prior art relevant for judging the unity of the invention:

D1: USP 3,948,504

Document D1 (see in particular column 2, line 26 to column 6, line 56, Figs. 1 to 3) discloses:

A method for producing a printed product with the steps:
a) unrolling a web of material from a first roll 11 to 14,
b) imprinting the web of material,
c) winding the imprinted web of material up into a new roll 21 to 24,
d) unwinding a first imprinted web 29 of material from a roll 28,
e) unwinding a second imprinted web 30 of material from a further roll,
f) bringing the webs 29, 30 of material together in a superstructure (Fig. 2),

g) separating the webs 29, 30 of material each into several partial webs 32,
h) mixing the partial webs 32 by means of a turning bar arrangement 33, 82a-c,
i) longitudinal folding of the mixed partial webs 32,
j) transverse cutting and transverse folding of the partial webs 32 (claim 1).

A further processing device of a roller printing press with the following characteristics:
a) several roll changers 28 (Fig. 2) for unwinding imprinted webs 29, 30 of material are arranged,
b) a draw-in unit 56 to 64 is arranged downstream of each roll changer,
c) a longitudinal cutting device 31 for cutting the webs of material into partial webs 32 of material is arranged directly after the draw-in units,
d) a turning bar arrangement 33, 82a-c is provided downstream of the longitudinal cutting device 31,
e) at least one former 88 to 91, one transverse cutting device 98, 99 and at least one transverse folder are arranged downstream of the turning bar arrangement (claim 2).

A comparison of the instant groups of claims with the mentioned documents shows that the following characteristics make a contribution to the prior art and can therefore be considered as special technical characteristics in accordance with Rule 13.2 PCT:

Group I: wherein the steps a) to c) are performed at a higher speed of the web of material than the steps d) to j).

Group II: Each roll changer of the further processing device has its own position-regulated electric drive mechanism, a control device controls these electric drive mechanisms in such a way that successive identical print images of the two webs of material agree or have a constant spacing, i.e. maintain registration.

3. Problems which have been solved by the special technical characteristics are:

Group I: Increase of the production speed.
Group II: Provision of a suitable drive mechanism for the roll changers.

These problems are different from each other or known in the prior art (see above).

4. It furthermore results from checking the question whether common special technical characteristics possibly exist because of a technical effect, that the technical effect of the first group consists in an increase in the production flexibility, that the technical effect of the second group is seen in that respectively identical print images of the two webs of material retain registration.

This shows that there is also no corresponding technical effect. The result of this is that it is not possible to determine a technical interrelationship between the two inventions either on the basis of the object on which the respective invention is based or of their attainment defined by the special technical characteristics of each invention, which would realize a single common inventive idea.

5. Thus, there is no unity of the invention in accordance with Rules 13.1 and 13.2 PCT between the mentioned groups of claims, either in respect to the special technical characteristics or in respect to the attained objects.

Re.: Item VIII

1. It is stated in step k) of claim 1 that the steps a) to c) are performed at a higher speed of the web of material than steps d) to j). It is unclear in this connection which speed of the web of material is meant (Article 6 PCT).

It should therefore be clarified in claim 1 that the conveying speed of the web of material (see application documents, page 5, first paragraph) is meant.

Re.: Item V

1. Reference is made in the instant notification to the following documents:

D1: USP 3,948,504
D2: DE-A-198 37 117
D3: DE-A-43 25 725

2. Group I

Document D1 (see in particular column 2, line 26, to column 6, line 56, Fig. 1 to 3) is considered to be the closest prior art in respect to the subject of claim 1. It discloses (the references refer to this document):

A method for producing a printed product with the steps:

a) unrolling a web of material from a first roll 11 to 14,

b) imprinting the web of material,

c) winding the imprinted web of material up into a new roll 21 to 24,

d) unwinding a first imprinted web 29 of material from a roll 28,

e) unwinding a second imprinted web 30 of material from a further roll,

f) bringing the webs 29, 30 of material together in a superstructure,

g) separating the webs 29, 30 of material each into several partial webs 32,

h) mixing the partial webs 32 by means of a turning bar arrangement 33, 82a-c,

i) longitudinal folding of the mixed partial webs 32,

j) transverse cutting and transverse folding of the partial webs 32.

The subject of claim 1 therefore differs from the known method in that the steps a) to c) are performed at a higher speed of the web of material than the steps d) to j).

Therefore the subject of claim 1 is novel (Article 33(2) PCT).

Thus the object to be attained by means of the present invention can be seen to consist in increasing the production speed.

The attainment proposed in claim 1 of the instant application is based on inventive activities for the following reasons (Article 33(3) PCT):

No information regarding the speed of the web of material in the roller printing press or further processing device can be found in document D1.

Document D2 describes a method for the production of printed products, wherein paper webs are imprinted, placed on top of each other, combined, longitudinally folded, cut and wound up. D2 does not contain any suggestion as to the speed at which the web of material is conveyed.

Document D3 describes a method for imprinting foil webs. No suggestion can be found in document D3 regarding

the relationship of the speed of the web of material in the printing press to the speed of the web of material in a further processing device.

3. Group II

(Document D1 (see in particular column 2, line 26, to column 6, line 56, Fig. 1 to 3) is considered to be the closest prior art in respect to the subject of claim 2. It discloses (the references refer to this document):

A further processing device of a roller printing press with the following characteristics:

a) several roll changers 28 for unwinding imprinted webs 29, 30 of material are arranged,

b) a draw-in unit 56 to 64 is arranged downstream of each roll changer,

c) a longitudinal cutting device 31 for cutting the webs of material into partial webs 32 of material is arranged directly after the draw-in units,

d) a turning bar arrangement 33, 82a-c is provided downstream of the longitudinal cutting device 31,

e) at least one former 88 to 91, one transverse cutting device 98, 99 and at least one transverse folder are arranged downstream of the turning bar arrangement.

Therefore the subject of claim 2 differs from the known method in that each roll changer of the further processing device has its own position-regulated electric drive mechanism, a control device controls these electric drive mechanisms in such a way that successive identical print images of the two webs of material agree or have a constant spacing, i.e. maintain registration.

Therefore the subject of claim 2 is novel (Article 33(2) PCT).

Thus the object to be attained by means of the present invention can be seen in providing a suitable drive mechanism for the roll changers.

The attainment proposed in claim 2 of the instant invention is based on inventive activities for the following reasons (Article 33(3) PCT):

No suggestion can be taken from either document D1, D2 or D3 for providing the roll changers of a further processing device each with its own position-regulated electric drive

mechanism and to regulate these individual drive mechanisms so they maintain registration.

4. Claims 4 to 20 depend from claim 1 or 2 and therefore also meet the requirements of PCT regarding novelty and inventive activities.

Specification

Method for the Production of a Printed Product, Processing Device, and System for the Production of Printed Products

The invention relates to a method for producing a printed product, a device for further processing, as well as an installation for producing printed products in accordance with the preambles of claims 1, 2 or 3.

DE 43 25 725 C2 shows a web-fed rotary printing press with a hot air dryer and cooling rollers, wherein the web is rolled up again after having been printed.

DE 198 37 117 A1 describes a method for producing newspapers, wherein webs imprinted with the editorial contents and contents of inserts are wound on assigned rolls. The rolls required for a complete newspaper are then rolled off again, combined and longitudinally folded.

USP 3,948,504 discloses an installation for processing two imprinted webs of material, each of which is rolled off a roll changer. Each one of these webs of material is longitudinally cut and is the conducted over turning bars to the longitudinal former. All longitudinally folded partial webs are transversely cut downstream of the longitudinal former.

The object of the invention is based on creating a method for producing a printed product, a device for further processing, as well as an installation for producing printed products.

In accordance with the invention, this object is attained by means of the characteristics of claims 1, 2 or 3.

The advantages to be attained by means of the invention consist in particular in that a very high degree of production flexibility is achieved by means of the method of the invention. For one, the method permits the 100% utilization of the production speed which can be reached by the web-fed printing press, entirely regardless of the working speed of the separating devices. Also, by means of the method of the invention it is very simple to produce printed products which are put together from different parts,

Claims

1. A method for producing a printed product, with the steps of:

a) unrolling a web (04) of material from a first roll (02),

b) imprinting the web (04) of material,

c) winding the imprinted web (04) of material up into a new roll (12),

d) unwinding a first imprinted web (16a) of material from a roll (12a),

e) unwinding a second imprinted web (16b) of material from a further roll (12b),

f) bringing the two webs (16a, 16b) of material together in a superstructure (17),

g) separating the webs (16a, 16b) of material each into several partial webs (19a, 19b),

h) mixing the partial webs (19a, 19b) by means of a turning bar arrangement (21),

i) longitudinal folding of the mixed partial webs (19a, 19b),

j) transverse cutting and transverse folding of the partial webs (19a, 19b),

k) wherein the steps a) to c) are performed at a higher speed of the web (04) of material than the steps d) to j).

2. A further processing device of a web-fed printing press with the following characteristics:

a) several roll changers (13a, 13b) for unwinding imprinted webs (16a, 16b) of material are arranged,

b) each roll changer (13a, 13b) of the further processing device has its own position-controlled electric drive mechanism,

c) a control device controls these electric drive mechanisms in such a way that successive identical print images on the two webs (16a, 16b) of material agree or have a constant spacing, i.e. maintain registration,

d) a draw-in unit (14a, 14b) is arranged downstream of each roll changer,

e) a longitudinal cutting device (18a, 18b) for cutting the webs (16a, 16b) of material into partial webs (19a, 19b) of material is arranged directly after the draw-in units,

f) a turning bar arrangement (21) is provided downstream of the longitudinal cutting device (18a, 18b),

g) at least one former (24, 26), one transverse cutting device and at least one transverse folder (22, 23) are arranged downstream of the turning bar arrangement (21).

3. An installation for producing printed products with the following characteristics:

a) a web-fed rotary printing press with a roll changer (01), several print units (07) and a re-reeling device (11) is arranged,

b) a further processing device with at least one roll changer (13a, 13b), a superstructure (17), at least one former (24, 26) for longitudinal folding and at least one folder (22, 23) for transverse folding are arranged,

c) the web-fed printing press and the further processing unit are arranged in a common building.

4. The method in accordance with claim 1 or the further processing device in accordance with claim 2 or the installation in accordance with claim 3, characterized in that a web (16a) of material is separated into two partial webs (19a).

5. The method in accordance with claim 1 or the further processing device in accordance with claim 2 or the installation in accordance with claim 3, characterized in that a web (16b) of material is separated into three partial webs (19a).

6. The method in accordance with claim 4 or the further processing device in accordance with claim 4 or the installation in accordance with claim 4, characterized in

that the two partial webs (19a) each have a width of two pages.

7. The method in accordance with claim 5 or the further processing device in accordance with claim 5 or the installation in accordance with claim 5, characterized in that the three partial webs (19b) have a width of two pages, and the two other partial webs (19b) each have a width of one page.

8. The method or the further processing device in accordance with claim 6 or 7, characterized in that each page corresponds to a newspaper page.

9. The further processing device in accordance with claim 2 or the installation in accordance with claim 3, characterized in that the web-fed printing press and the further processing device are arranged side-by-side.

10. The further processing device in accordance with claim 2 or the installation in accordance with claim 3, characterized in that the web running direction of the roll changers (01) of the web-fed printing press and the roll changers (13a, 13b) of the further processing device extend in parallel.

11. The further processing device in accordance with claim 2 or the installation in accordance with claim 3, characterized in that the web-fed printing press has a dryer (08) on a path of the web (04) from the print units (07) to the re-reeling device (11).

12. The further processing device in accordance with claim 2 or the installation in accordance with claim 3, characterized in that the web-fed printing press has a cooling roller arrangement (09) on a path of the web (04) from the print units (07) to the re-reeling device (11).

13. The further processing device in accordance with claim 2, characterized in that it has a former (24) centered on the web (16a, 16b) which is not longitudinally cut, and at least one former (26), which is centered on one of the partial webs (19a, 19b).

14. The method in accordance with claim 1 or the further processing device in accordance with claim 2 or the installation in accordance with claim 3, characterized in that the web speed of the web-fed rotary printing press is at least 30% greater than the web speed of the further processing device.

15. The method or the further processing device or the installation in accordance with claim 14, characterized that the web speed is respectively of the maximum production speed.

16. The method in accordance with claim 1, characterized in that the imprinted rolls (12a, 12b) have each been produced by a 16-page printing press.

17. The method in accordance with claim 1, characterized in that a 32-page printed product is produced.

18. The further processing device in accordance with

claim 2, characterized in that the web-fed printing press is a 16-page printing press.

19. The further processing device in accordance with claim 2, characterized in that the created printed product has 32 pages.

20. The further processing device in accordance with claim 2, characterized in that the printing press is embodied as a jobbing printing press.